

## REMARKS

**Claims 1 and 23 are rejected under 35 USC 103a as being unpatentable over Joch et al. (US 7,227,901) in view of Jeon et al. (US 5,937,101).**

The applicant respectfully asserts that claims 1 and 23 should not be found unpatentable over Joch et al. in view of Jeon et al. because neither Joch et al. nor Jeon et al. teach each and every limitation of the present invention as claimed in claim 1. In particular, there are at least two features as claimed by the present invention that are not disclosed by the prior art. Additionally, as is explained below, the difference between the teachings of Joch et al. and Jeon et al. with the present invention would not be obvious to a person of ordinary skill in the art without further inventive process.

Specifically, applicant respectfully asserts that Jeon et al. do not teach the following limitations of the present invention, as are claimed in claim 1:

“selecting one of a plurality of filters to filter a plurality of pixels around the block boundary to reduce the blocking artifact according to the region mode, wherein at least one of the filters is a one dimensional filter formed by using a 4-point Hadamard Transform (HT).” (claim 1 – emphasis added)

### **1<sup>st</sup> difference with respect to the prior art**

In the Office action of 11/02/2007, the Examiner firstly admits the Joch et al. do not disclose using a 4-point Hadamard transform stating, “It is noted that Joch does not particularly disclose using a 4-point Hadamard Transformation as claimed.” The Examiner then continues by stating, “However, Jeon teaches using a Hadamard Transformation in inverse transform operator (23 of fig.2) the obviously includes 4-point for post processing (26 of fig.2).” However, the applicant respectfully disagrees with this second comment by the Examiner stating the Jeon teachers the Hadamard transformation for filtering pixels around the block boundary. In particular, concerning element 23 of Fig.2 by Jeon et al, col 2, lines

47-52 states, “The data compression with respect to each block in  $N^*N$  inverse transform operator 23 shown in FIG. 1, employs a discrete cosine transform (DCT), Walsh-Hadamard transform (WHT), discrete Fourier transform (DFT) or discrete sine transform (DST) method.” Applicant notes that Jeon et al. do not disclose or suggest utilizing the Hadamard transform to perform pixel encoding around the block boundary but instead teach it being utilized for “each block”. Applicant notes that block based filtering is very different than the filtering of individual pixels around the block boundary as is claimed in the present invention.

**2<sup>nd</sup> difference with respect to the prior art**

10 Furthermore, applicant points out that the present invention very specifically claims a 4-point Hadamard Transform (HT), which is not disclosed by Jeon et al. The Examiner stated this would be obvious; however, the applicant respectfully disagrees because a 4-point HT transform is a very specific form of the Hadamard transform and is not normally utilized to filter pixels around the block boundary. Neither Joch et al. nor Jeon et al. teach or suggest  
15 using a 4-point Hadamard transform in a way similar to claimed by the present invention. The present invention advantageously and uniquely utilizes the 4-point form of the Hadamard transform and should therefore be found allowable with respect to the cited references of the Joch et al. and Jeon et al.

20 **Differences between present invention and prior art not obvious**

Applicant also respectfully asserts that utilizing a Hadamard transform to filter pixels around the block boundary according to the region mode as is claimed in the present invention would not be apparent to a person of ordinary skill in the art without further inventive process because the Hadamard transform is normally employed on a block by block  
25 basis, as is disclosed in Jeon et al. A person of ordinary skill in the art would not have any motivation to utilize a Hadamard transform to filter individual pixels around the block boundary without further inventive process. Specifically, the specific 4-point form of the Hadamard transfer is never utilized for filtering pixels around the block boundary in the prior

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art and therefore a person skilled in the art would not find it obvious to try.

For at least the above reasons, applicant asserts that claim 1 of the present invention should be found allowable with respect to the cited references of Joch et al. and Jeon et al.

5 Claims 2-23 are dependent claims and should be found allowable for at least the same reasons.

**Allowable Subject Matter – Claims 2-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including**

10 **all of the limitations of the base claim and any intervening claims.**

The applicant thanks the Examiner for the allowable subject matter.

**Conclusion:**

Thus, all pending claims are submitted to be in condition for allowance with respect to  
15 the cited art for at least the reasons presented above. The Examiner is encouraged to telephone the undersigned if there are informalities that can be resolved in a phone conversation, or if the Examiner has any ideas or suggestions for further advancing the prosecution of this case.

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Sincerely yours,



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10 Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 13 hours behind the Taiwan time, i.e. 9 AM in D.C. = 10 PM in Taiwan.)